

## **TECHNICAL BASIS FOR TIER I OPERATING PERMIT**

**DATE:** December 4, 2002

**PERMIT WRITER:** Shawnee Yihong Chen

**PERMIT COORDINATOR:** Bill Rogers

**SUBJECT:** AIRS Facility No. 067-00001, TASCO, Paul  
Final Tier I Operating Permit

<b>PERMITTEE:</b>	The Amalgamated Sugar Company, LLC Route 1, Box 700 Paul, ID 83347
<b>PERMIT NO:</b>	067- 00001
<b>STANDARD INDUSTRIAL CLASSIFICATION (SIC):</b>	2063
<b>DESCRIPTION:</b>	Beet-sugar manufacturer
<b>KIND OF PRODUCTS:</b>	Sugar
<b>RESPONSIBLE OFFICIAL:</b>	Alan Swenson
<b>PERSON TO CONTACT:</b>	Alan Swenson
<b>TELEPHONE NO:</b>	(208) 438-2115
<b>NO. OF FULL-TIME EMPLOYEES:</b>	200 – 600
<b>AREA OF OPERATION:</b>	385 acres
<b>FACILITY CLASSIFICATION:</b>	A
<b>COUNTY:</b>	Minidoka
<b>AIR QUALITY CONTROL REGION:</b>	063
<b>UTM COORDINATES:</b>	274.0, 4721.0
<b>EXACT PLANT LOCATION:</b>	50 South 500 West, Paul, Idaho

## TABLE OF CONTENTS

LIST OF ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE.....	3
1. PURPOSE .....	4
2. SUMMARY OF EVENTS.....	4
3. BASIS OF THE ANALYSIS .....	4
4. REGULATORY ANALYSIS - GENERAL FACILITY .....	5
5. REGULATORY ANALYSIS - EMISSIONS UNITS.....	10
6. INSIGNIFICANT ACTIVITIES.....	25
7. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION.....	25
8. REGISTRATION FEES .....	28
9. AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS) FACILITY SUBSYSTEM.....	28
10. RECOMMENDATION.....	28
APPENDIX A.....	29
APPENDIX B.....	32

## LIST OF ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
AIRS	Aerometric Information Retrieval System
CAA	Clean Air Act
CaO	calcium oxide
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
ft	feet
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAPs	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pounds per hour
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	oxides of nitrogen
O&M	operation and maintenance
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter of 10 micrometer or less
POM	polycyclic organic matter
ppm	parts per million
psi	pounds per square inch
psig	pound per square inch gauge
PTC	permit to construct
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
TDS	total dissolved solids
TASCO	The Amalgamated Sugar Company, Paul
T/hr	tons per hour
T/yr	tons per year (1 T = 2,000 lb)
UTM	Universal Transverse Mercator
VOC	volatile organic compound

## **1. PURPOSE**

The purpose of this memorandum is to explain the legal and factual basis for this proposed Tier I operating permit in accordance with IDAPA 58.01.01.362, *Rules for the Control of Air Pollution in Idaho*.

The DEQ has reviewed the information provided by TASCO regarding the operation of their facility in Paul, Idaho. This information was submitted based on the requirements of the Tier I operating permit in accordance with IDAPA 58.01.01.300.

## **2. SUMMARY OF EVENTS**

On March 31, 1995, DEQ received a Tier I operating permit application from TASCO for their beet-sugar manufacturing facility located in Paul, Idaho. On August 4, 1995, DEQ received TASCO's revised application that replaced the March 31, 1995, application. The application was determined to be administratively complete on September 18, 1995. On February 2, 1999, and during the permit drafting phase of the project, DEQ received supplemental information.

The public comment period for the initial draft Tier I operating permit was held from February 21, 2001, to March 23, 2001. In responding to the comments received, some portions of the Tier I operating permit were extensively re-written; therefore, DEQ has redrafted the permit and is making available for public comment a second time. DEQ's responses to comments are presented as Appendix B of this document.

A public comment period was held from August 15, 2002 through September 17, 2002. The public hearing was held on September 16, 2002. A proposed permit was developed based on the comments submitted. The proposed permit was then forwarded to the EPA for their review as required by IDAPA 58.01.01.366. The EPA provided no written objection to the permit.

## **3. BASIS OF THE ANALYSIS**

The following documents were relied upon in preparing this memorandum and the Tier I operating permit:

- Tier I operating permit application (August 1, 1995, TASCO, Paul facility)
- Tier I operating permit application update dated February 3, 1999
- Compilation of Air Pollutant Emission Factors, AP-42, 5th Edition, January 1995, Office of Air Quality Planning and Standards, EPA
- 40 CFR Part 70
- Guidance developed by the EPA and DEQ
- Title V permits issued by other jurisdictions
- Information contained in DEQ's TASCO Paul source file
- Supplemental information supplied by TASCO during permit drafting
- C. David Cooper, *Air Pollution Control, A Design Approach*, Waveland Press, Inc. 1986, pp.190-191
- John Richards, *Control of Particulate Emissions*, Air Pollution Technology Institute Course 413, 1995, pp.7-8 and 7-9
- Combustion Evaluation in Air Pollution Control, APTI Course 427, Draft Revision, March 1994

## **4. REGULATORY ANALYSIS - GENERAL FACILITY**

### **4.1 Facility Description**

#### **4.1.1 General Process Description**

Beet-sugar processing operations consist of several steps including diffusion, juice purification, evaporation, crystallization, dried-pulp manufacturing, and sugar recovery from molasses. Descriptions of these operations are presented in the following paragraphs.

Prior to removing sucrose from the beets by diffusion, the cleaned and washed beets are sliced into long, thin strips called cossettes. The cossettes are conveyed to a continuous diffuser, in which hot water is used to extract sucrose from the cossettes. The sugar-enriched water that flows from the outlet of the diffuser is called raw juice and contains between 13% to 18% sugar. The raw juice proceeds to the juice purification operations. The processed cossettes, or pulp leaving the diffuser are conveyed to the dried pulp manufacturing operations.

In the juice purification stage, non-sucrose impurities in the raw juice are removed so that the pure sucrose can be crystallized. First, the juice passes through screens to remove any small cossette particles. Then the mixture is heated to 80° to 85° C (176° to 185° F) and proceeds to the liming system. In the liming system tank, milk of lime [ $\text{Ca}(\text{OH})_2$  aqueous solution] is added to the mixture to absorb or adhere to the impurities in the mixture. The juice is then sent to the first carbonation tank where  $\text{CO}_2$  gas is bubbled through the mixture to precipitate the lime as insoluble calcium crystals. Lime kilns are used to produce the  $\text{CO}_2$  and the lime used in carbonation. The lime is converted to milk of lime in a lime slaker. After filtration, the juice is softened. Then a small amount of  $\text{SO}_2$  is added to the juice to inhibit reactions that lead to darkening of the juice. The  $\text{SO}_2$  is produced by burning elemental sulfur in a sulfur stove or is purchased in liquid form. Following the addition of  $\text{SO}_2$ , the juice (known as thin juice) proceeds to the evaporators.

The evaporation process, which increases the sucrose concentration in the juice by removing water, is performed in a series of five evaporators. Steam from large boilers is used to heat the first evaporator, and the steam from the water evaporated in the first evaporator is used to heat the second evaporator, and so on through the five evaporators. After evaporation, the percentage of sucrose in the "thick juice" is 65% to 75%. Some of this thick juice is sent to storage tanks. Most of the thick juice is combined with crystalline sugars produced later in the process and dissolved in the high melter. The mixture is then filtered, yielding a clear liquid known as standard liquor, which proceeds to the crystallization operation.

Sugar is crystallized by low-temperature pan boiling. The standard liquor is boiled in vacuum pans until it becomes supersaturated. To begin crystal formation, the liquor is "seeded" with finely milled sugar. When the crystals reach the desired size, the mixture of liquor and crystals, known as massecuite or fillmass, is discharged to the mixer. From the mixer, the massecuite is poured into high-speed centrifugals, in which the liquid is centrifuged into the outer shell, and the crystals are left in the inner centrifugal basket. The sugar crystals are then washed with pure hot water, sent to the granulator (which is a rotary drum dryer), and then sent to the cooler. After cooling, the sugar is screened and then either packaged or stored in large silos for future packaging.

The liquid that was separated from the sugar crystals in the centrifugals is called syrup. This syrup serves as feed liquor for the "second boiling" and is introduced back into a second set of vacuum pans. The crystallization/centrifugation process is repeated once again, resulting in the production of molasses. Most of the molasses is shipped to the Twin Falls facility where it is desugared using the separation process. Some of the molasses is used in the production of livestock feed.

Wet pulp from the diffusion process is another product of sugar beet processing. Some of the wet pulp is sold as cattle feed directly. However, most of the wet pulp is pressed to reduce the moisture content from about 95% to 75%.

After pressing, the pulp may be sold as cattle feed or sent to the dryer. Before entering the dryer, concentrated separator by-product (CSB), or molasses, is added to the pressed pulp. The pressed pulp is then dried by hot air in a horizontal rotating drum known as a pulp dryer. The pulp dryer can be fired by natural gas, or coal. The resulting product is typically pelletized and is sold as livestock feed. The remainder of the dried pulp is sold in an unpelletized form.

#### **4.1.2 Facility Classification**

For the purposes of Tier I operating permit requirements, this facility is a major facility as defined by IDAPA 58.01.01.008.10 because the facility emits or has the potential to emit a regulated air pollutant in amounts greater than or equal to 100 T/yr, and it emits or has the potential to emit a single regulated HAP in excess of 10 T/yr and a combination of regulated HAPs in excess of 25 T/yr. For the purposes of PSD permitting requirements, this facility is a major facility as defined by IDAPA 58.01.01.006.55 and 40 CFR 52.21 because the facility emits or has the potential to emit a regulated air pollutant in excess of 250 T/yr. The steam plant (B&W boiler and Erie City boiler) is a designated facility in accordance with IDAPA 58.01.01.006.27(v). The SIC defining the facility is 2063, and the AIRS facility classification is A.

#### **4.1.3 Area Classification**

TASCO's Paul, Idaho facility is located in Minidoka County, which is located in AQCR 63. This area is designated unclassifiable for all state and federal criteria air pollutants. There are no Class I areas within 10 km of the facility.

#### **4.1.4 Permitting History**

Most emissions units in this facility were constructed prior to 1970; therefore, no PTCs were required. Air pollution source permits were issued on March 19, 1981, (Permit No. 13-1020-001-0) and on January 1, 1984 (Permit No. 1020-001). These air pollution source permits were issued by the Department of Health and Welfare and set forth the operating requirements for the boilers and pulp dryers.

#### **4.1.5 Non-applicability Determination**

Refer to Section 12 of the permit for non-applicability determinations.

Fuel-burning equipment is defined as any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer (IDAPA 58.01.01.006.41). The pulp dryers and lime kilns use combustion gasses directly to dry beet pulp and produce gas for carbonation (i.e. direct heat transfer). Because the pulp dryers and lime kilns use direct heat transfer, they do not meet the definition of fuel-burning equipment.

Permit Conditions 12.3 and 12.4 address the B&W and Erie City boilers. Per information provided by the applicant, both boilers were installed or modified before August 17, 1971. Therefore, 40 CFR 60 Subpart D, Standards of Performance for Fossil-fuel-fired Steam Generators for Which Construction is Commenced After August 17, 1971, does not apply.

Permit Condition 12.5 states that Permit Conditions 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, and 4.4 of Permit No. 1020-0001 dated January 1, 1984, are no longer applicable because they pertain to the 1984-1986 campaign seasons which have been completed.

#### **4.2 Facility-wide Applicable Requirements**

The following requirements apply generally to emissions units at the facility. The regulatory authority for each permit condition is cited in the permit.

#### **4.2.1 Permit Requirement - Fugitive Emissions - [IDAPA 58.01.01.650-651, 5/1/94]**

##### **4.2.1.1 Applicable Requirement**

Permit Condition 1.1 states that all reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

##### **4.2.1.2 Monitoring, Recordkeeping, and Reporting**

Permit Condition 1.2 states that the permittee is required to monitor and maintain records of the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include using water or chemicals, applying dust suppressants, using control equipment, covering trucks, paving roads or parking areas, and removing materials from streets.

Permit condition 1.3 requires that the permittee maintain a record of all fugitive dust complaints received. In addition, the permittee is required to take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The permittee is also required to maintain records that include the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

To ensure that the methods being used by the permittee to reasonably control fugitive particulate matter emissions whether or not a complaint is received, Permit Condition 1.4 requires that the permittee conduct periodic inspections of the facility. The permittee is required to inspect potential sources of fugitive emissions during daylight hours and under normal operating conditions. If the permittee determines that the fugitive emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee is also required to maintain records of the results of each fugitive emission inspection.

Permit Conditions 1.3 and 1.4 require the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within 24 hours of receiving a valid complaint or determining that fugitive particulate emissions are not being reasonably controlled meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

Monthly facility-wide inspections are required. Records of each inspection shall be kept in accordance with Permit Condition 1.11. Reporting shall be in accordance with the requirements of Permit Condition 1.10.

#### **4.2.2 Permit Requirement - Odorous Gas, Liquids, or Solids - [IDAPA 58.01.01.775-776, 5/1/94]**

##### **4.2.2.1 Applicable Requirement**

Permit Condition 1.5 and IDAPA 58.01.01.776 both state: *"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids to the atmosphere in such quantities as to cause air pollution."*

##### **4.2.2.2 Monitoring, Recordkeeping, and Reporting**

Permit Condition 1.6 requires the permittee to maintain records of all odor complaints received. If the complaint has merit, the permittee is required to take appropriate corrective action as expeditiously as practicable. The records are required to contain the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Permit Condition 1.6 requires the permittee to take corrective action as expeditiously as practicable. In general, DEQ believes that taking corrective action within 24 hours of receiving a valid odor complaint meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

#### **4.2.3 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]**

##### **4.2.3.1 Applicable Requirement**

The requirements of IDAPA 58.01.01.625 and Permit Condition 1.7 state: *"(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined . . ."* by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, NO<sub>x</sub>, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this rule.

##### **4.2.3.2 Monitoring, Recordkeeping, and Reporting**

To ensure reasonable compliance with the visible emissions rule, Permit Condition 1.8 requires that the permittee conduct routine visible emissions inspections of the facility. The permittee is required to inspect potential sources of visible emissions during daylight hours and under normal operating conditions.

If opacity is determined to be greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee must take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA 58.01.01.130-136. The permittee is also required to maintain records of the results of each visible emissions inspection which must include the date of each inspection, a description of the permittee's assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Permit Condition 1.8 requires the permittee to take corrective action as expeditiously as practicable. In general, DEQ believes that taking corrective action within 24 hours of discovering visible emissions meets the intent of this requirement.

#### **4.2.4 Permit Requirement - Excess Emissions - [IDAPA 58.01.01.130, 4/5/00]**

##### **4.2.4.1 Applicable Requirement**

Permit Condition 1.9 requires that the permittee comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upsets, and breakdowns. This section is fairly self-explanatory and no additional detail is necessary in this technical memorandum. It should, however, be noted that IDAPA 58.01.01 subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the operating permit as applicable requirements. These provisions of the *Rules* only apply if the permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow DEQ to determine if an enforcement action to impose penalties is warranted. Section 131.01 states *" . . . The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05."*

Failure to prepare or file procedures pursuant to Sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the permittee has the option to follow the procedures in Subsections 133.02, 133.03, 134.04, and 134.05, and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.



Excess emissions procedures for the B&W boiler start-up can be found in TASC0's Tier I application in the Public Comment Package.

#### **4.2.4.2 Monitoring, Recordkeeping, and Reporting**

The compliance demonstration is contained within the text of Permit Condition 1.9. No further clarification is necessary here.

#### **4.2.5 Permit Requirement - Open Burning - [IDAPA 58.01.01.600-616, 5/1/94]**

Refer to Permit Condition 1.12. The permittee shall comply with all applicable portions of IDAPA 58.01.01.600-616 for open burning.

#### **4.2.6 Permit Requirement – Renovation and Demolition - [40 CFR 61, Subpart M]**

Refer to Permit Condition 1.13. The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

#### **4.2.7 Permit Requirement - Risk Management Plan - [40 CFR 68]**

Refer to Permit Condition 1.14. Any facility that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

This facility is not currently subject to the requirements of 40 CFR 68. However, should the facility ever become subject to the requirements of 40 CFR 68, then it must comply with the provisions contained in 40 CFR 68 by the time listed above.

#### **4.2.8 Test Methods**

Refer to Permit Condition 1.15. The EPA reference test methods listed in Permit Condition 1.15 are the methods to be used to measure pollutant emissions, unless DEQ approves an alternative method.

DEQ recommends submittal of a compliance test protocol prior to any compliance test.

#### **4.2.9 Permit Requirement - Sulfur Content - [IDAPA 58.01.01.728, 729, 5/1/94]**

##### **4.2.9.1 Applicable Requirement**

Refer to Permit Conditions 1.16 and 1.17. These permit conditions contain sulfur content limits for fuel oils and coal, as specified in IDAPA 58.01.01.728 and 729.

##### **4.2.9.2 Monitoring, Recordkeeping, and Reporting**

Refer to Permit Conditions 1.16.1 and 1.17.1. The permittee is required to maintain supplier's certifications for sulfur content for each fuel shipment received. In cases where there is no supplier's certification, the permittee must perform an analysis in accordance with appropriate ASTM methodology.

#### **4.2.10 Fuel-burning Equipment – [IDAPA 58.01.01.676, 677, 4/5/00]**

See Permit Conditions 1.18 and 1.19. This requirement establishes the applicable particulate emission limits for fuel-burning equipment as required by IDAPA 58.01.01.676-677.

#### **4.2.11 Recycling and Emissions Reduction - [40 CFR 82, Subpart F]**

Per information provided in TASCOS's September 15, 2000 submittal, TASCOS does not service, maintain, repair, or dispose of appliances with class I and class II refrigerants. Therefore the requirements of "Recycling and Emissions Reduction" are not included in the permit.

#### **4.2.12 Compliance Testing**

See Permit Condition 1.20. This permit condition establishes the compliance testing requirements.

#### **4.3 Hazardous Air Pollutants**

According to TASCOS February 3, 1999 submittal, the potential to emit all HAPs is 51.8 T/yr. The potential to emit acetaldehyde is 34 T/yr. Therefore, the facility is a major facility with regard to HAPs in accordance with IDAPA 58.01.01.008.10. The HAPs are emitted from the B&W boiler, Erie City boiler, pulp dryers, lime kilns, and main mill. The list of HAPs emitted and their potential emissions is attached as Appendix A of this technical memorandum. No specific regulatory requirement applies to any HAP emitted as of the date of this permitting action.

#### **4.4 Alternative Operating Scenarios**

No alternative operating scenarios were proposed in the application.

#### **4.5 Trading Scenarios**

No emissions trading scenarios were requested in the permit application.

#### **4.6 Affected States Notice and Review**

The states of Utah and Nevada are within 50 miles of the facility. Each is an "affected state" as defined in IDAPA 58.01.01.008.02. Affected states are sent copies of the public comment package for review and comment as required in IDAPA 58.01.01.364.02.

### **5. REGULATORY ANALYSIS - EMISSIONS UNITS**

The permit groups together emissions unit groups that may have one or more processes with similar applicable requirements. The emissions unit groups are listed in the permit as listed below:

Emissions Unit Group 1 - B&W Boiler  
B&W boiler (S-B1)

Emissions Unit Group 2 - Erie City Boiler  
Erie City boiler (S-B2)

Emissions Unit Group 3 - Pulp Drying  
South dryer (S-D1)  
North dryer (S-D2)

Emissions Unit Group 4 - Pellet Cooling  
Pellet cooler #1 (S-D3)

Pellet cooler #2 (S-D4)  
Pellet cooler #3 (S-D5)

Emissions Unit Group 5 - Lime Kilns  
Gas kiln (S-K1)  
Coke kiln (S-K2)

Emissions Unit Group 6 - Lime Slakers  
Process and flume slakers (S-K3)

Emissions Unit Group 7 - Drying Granulator  
Drying granulator (S-W1)

Emissions Unit Group 8 - Cooling Granulators  
No. 1 cooling granulator (S-W2)  
No. 2 cooling granulator (S-W3)

Emissions Unit Group 9 - Sugar Handling  
Sugar handling process baghouse (S-W4)  
Sugar handling bulk loading baghouse (S-W5)

Emissions Unit Group 10 - Lime Kiln Building Material Handling  
Four material handling baghouses

A discussion of the individual emissions units as well as the regulatory requirements and methods to determine compliance follows.

## 5.1 Emissions Unit 1 - B&W Boiler (S-B1)

Table 5.1 EMISSIONS UNIT 1 - B&W BOILER (S-B1)

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emission Control Device
P-B1	200,000 pounds steam per hour coal-fired boiler (S-B1)	One multiclone and one spray-chamber scrubber in series

### 5.1.1 Emissions Unit Description

The B&W boiler has a rated steam production capacity of 200,000 pounds of steam per hour. It is a coal-fired stoker boiler, which produces 200 psi, 500°F, super-heated steam for power production and evaporation water for sugar beet juices. The B&W boiler, in conjunction with the Erie City boiler, provides steam for electricity and for sugar production processes in the main mill.

The B&W boiler's emissions are created by combusting coal. Emissions are controlled by a multiclone and a horizontal spray-chamber scrubber in series. The emissions from this emissions unit consist of PM, PM<sub>10</sub>, SO<sub>x</sub>, CO, NO<sub>x</sub>, VOCs, and HAPs.

The parameters for the B&W boiler stack are as follows:

Stack Height:	127 ft
Stack Diameter:	10 ft
Stack Flow Rate:	91,000 - 108,000 acfm
Stack Temperature:	112 - 120°F

According to TASCOS permit application, the B&W boiler is not subject to 40 CFR 60, Subpart D because it was not constructed, reconstructed, or modified after August 17, 1971.

**5.1.2 Permit Requirement – Fuel-burning Equipment Grain-loading Standard - [IDAPA 58.01.01.677, 5/1/94; Permit #13-1020-0001-00 3/19/81]**

**5.1.2.1 Applicability**

Permit Condition 2.1 states: "A person shall not discharge to the atmosphere from any fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than 10 MMBtu/hr, PM in excess of 0.100 gr/dscf corrected to 8% oxygen."

**5.1.2.2 Monitoring, Recordkeeping, and Reporting**

See Permit Conditions 2.4, 2.7, 2.8, 2.9, 2.10, and 2.11.

The following permit conditions are required to reasonably assure compliance with the grain-loading standard (Permit Condition 2.1):

- Conduct a compliance test within 12 months of permit issuance (Permit Condition 2.4).
- Install, operate, calibrate, and maintain monitoring devices to measure the scrubber water flow rate and pressure drop across the multicone (Permit Condition 2.7).
- Inspect the control equipment annually and repair as necessary (Permit Condition 2.8).
- Collect and analyze a combined concentration of suspended particulate and TDS (mg of particulate/liter of water) in the scrubber's recirculated water (Permit Condition 2.9).
- Maintain all monitoring information in accordance with Permit Condition 1.11 (Permit Condition 2.10).
- Develop, submit for review and approval, and operate under the conditions contained in an O&M manual (Permit Condition 2.11).

**5.1.3 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]**

**5.1.3.1 Applicability**

Refer to Permit Condition 2.2 and 1.7.

**5.1.3.2 Monitoring, Recordkeeping, and Reporting**

See Permit Conditions 2.6 and 2.11.

The permittee is required to follow the procedures contained in Permit Condition 2.6. The provisions of Permit Condition 2.5 are similar to those of Permit Condition 1.8 except for the frequency of monitoring. Permit Condition 2.5 requires more frequent monitoring as a means to assure reasonable compliance with IDAPA 58.01.01.625. Permit Condition 2.11 requires the development of an O&M manual that contains the operating and maintenance specifications for the process equipment and control equipment. Operating within these specifications will reasonably assure compliance with IDAPA 58.01.01.625.

## 5.2 Emissions Unit 2 - Erie City Boiler (SB-2)

Table 5.2 EMISSIONS UNIT 2 ERIE CITY BOILER (SB-2)

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emissions Unit(s)/ Process(es)	Emission Control Device
P-B2A	200,000 lbs/hr steam boiler when fired with coal, and	Boiler (S-B2) (while fired with coal, or the combination of coal and natural gas)	One multiclone and one spray-chamber scrubber in series
P-B2B	250,000 lb/hr steam boiler when fired with natural gas	Boiler (S-B2) (while fired by natural gas only)	Multiclone

### 5.2.1 Emissions Unit Description

The Erie City boiler has a rated steam production capacity of 200,000 pounds per hour when fired with coal, and 250,000 lbs steam/hr when fired with natural gas. The Erie City boiler is a coal pulverized/natural gas, horizontally-fired boiler that produces 400 psi, 600°F, super-heated steam for power production, and evaporation water for sugar beet juices.

The Erie City boiler, in conjunction with the B&W boiler provides steam for electricity and for sugar production processes in the main mill.

Emissions from the Erie City boiler are created by combusting coal and natural gas. The emissions consist of PM, PM<sub>10</sub>, SO<sub>x</sub>, CO, NO<sub>2</sub>, VOCs, and HAPs. When combusting coal or the combination of coal and natural gas, PM emissions are controlled by a multiclone and a spray-chamber scrubber in series. When combusting only natural gas, a multiclone controls PM emissions only. PM emissions from natural gas combustion are negligible.

The parameters for the Erie City boiler stack are as follows:

Stack Height:	127 ft
Stack Diameter:	10 ft
Stack Flow Rate:	91,000 - 108,000 acfm
Stack Temperature:	112 - 120°F

According to TASCOS permit application, the Erie City boiler is not subject to 40 CFR 60, Subpart D because it was not constructed, reconstructed, or modified after August 17, 1971.

### 5.2.2 Permit Requirement - Fuel-burning Equipment - [IDAPA 58.01.01.677and 678]

IDAPA 58.01.01.677 states: "A person shall not discharge to the atmosphere from any fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than 10 million BTU per hour, particulate matter in excess of the concentrations shown in the following table." The effluent gas volume shall be corrected to the O<sub>2</sub> concentration shown.

When two or more types of fuel are burned concurrently, the allowable emission shall be determined by proportioning the gross heat input and emission standards for each fuel.

**Table 5.3 FUEL BURNING EQUIPMENT**

<b>Fuel Type</b>	<b>Allowable Particulate Emissions</b>	<b>Percent Oxygen</b>
Coal only	0.100 gr/dscf	8%
The combination of coal and natural gas <sup>a,b</sup>	$0.100 * X + 0.011 * Y$	8%
Gas only	0.015 gr/dscf	3%

<sup>a</sup> For natural gas, correct 0.015 gr/dscf at 3% O<sub>2</sub> to grain-loading at 8% O<sub>2</sub>:

$$C \text{ (gr/dscf, at 8\% O}_2\text{)} = 0.015 \text{ gr/dscf} \times (21-8)/(21-3) = 0.011 \text{ gr/dscf}$$

The grain-loading standard at 8% O<sub>2</sub> for the combination of natural gas and coal combustion can be expressed as the following:

$$0.100 * X + 0.011 * Y$$

Where:

X is the percentage of total heating input derived from the combustion of coal

Y is the percentage of total heating input derived from the combustion of natural gas

<sup>b</sup> References:

Combustion Evaluation in Air Pollution Control," EPA APTI Course 427, Draft Revision, March 1994, P.125.

## 5.2.3 Compliance Testing

Refer to Permit Condition 3.5.

Permit Condition 3.5 requires the permittee to conduct a compliance test within 12 months of permit issuance using the test methods and procedures contained in IDAPA 58.01.01.157 and Permit Condition 1.20.

Compliance testing is required when the boiler is combusting coal, which is the worst case operating condition. Compliance testing is not required when the boiler is combusting a combination of coal and natural gas, or natural gas exclusively. Compliance with the grain-loading standard for coal reasonably assures compliance with the emissions standards for the other fueling scenarios.

Monitoring and recording when fuel is changed is the compliance demonstration method for the combination of coal and natural gas and for the exclusive use of natural gas.

As specified in the permit, the permittee is required to maintain monitoring records in accordance with Permit Condition 1.11.

## 5.2.4 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]

### 5.2.4.1 Applicability

Refer to Permit Condition 3.3

### 5.2.4.2 Monitoring, Recordkeeping, and Reporting

Refer to Permit Condition 3.7.

When combusting only natural gas, visible emissions are not expected under normal operations; therefore, the requirements contained in Permit Condition 1.8 are sufficient to reasonably assure compliance with IDAPA 58.01.01.625. Permit Condition 3.2 requires the permittee to record the period of time when the boiler is fired exclusively by natural gas.

When combusting only coal, or any combination of coal and natural gas, weekly visible emissions evaluations are required (see Permit Condition 3.7). The provisions of Permit Condition 3.7 are similar to those of Permit Condition 1.8 except for the frequency of monitoring. Permit Condition 3.7 requires more frequent monitoring as a means to assure reasonable compliance with IDAPA 58.01.01.625. Permit Condition 3.12 requires the development of an O&M manual that contains the specifications at which the equipment will be maintained and operated so compliance with IDAPA 58.01.01.625 can be reasonably assured.

### 5.3 Emissions Unit 3 - Pulp Drying

Table 5.4 EMISSIONS UNIT 3 - PUPL DRYING

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emission Control Device
P-D1A	48.5 T/hr process weight input rate South Pulp Dryer (S-D1)	A pair of cyclones (A - D1A) operated in parallel and then exhausted to a pair of spray-impingement-type scrubbers (A - D1B) operated in parallel.
P-D1B		
P-D2A	56.9 T/hr process weight input rate North Pulp Dryer (S-D2)	A pair of cyclones (A - D2A) operated in parallel and then exhausted to a pair of spray-impingement-type scrubbers (A - D2B) operated in parallel
P-D2A		

#### 5.3.1 Emissions Unit Description

Emissions Unit Group 3 consists of the South pulp dryer and North pulp dryer. These two direct-fired pulp dryers are used to dry pressed beet pulp. The pressed beet pulp is sold as cattle feed. The two dryers are primarily coal-fired. Exhaust gasses from each dryer split into two streams. Each stream passes through a cyclone and a spray-impingement-type scrubber in series.

Per information provided by TASCO's submittal dated February 3, 1999, the south dryers designed process weight is 48.5 T/hr, and the north dryers designed process weight is 56.9 T/hr. Process weight is defined in IDAPA 58.01.01.006.80.

Emissions from the pulp dryers consist of PM, PM<sub>10</sub>, SO<sub>x</sub>, CO, NO<sub>2</sub>, VOCs, and trace amounts of HAPs.

The parameters for each of the pulp dryer stacks are as follows:

Stack Height:	98 ft
Stack Diameter:	6 ft
Stack Flow Rate:	34,000 - 57,500 acfm
Stack Exit Temperature:	128 -190°F

#### 5.3.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00; Permit #1020-0001, 1/1/84, p.2 of 6, limit 1.2]

##### 5.3.2.1 Applicability

Permit Condition 4.1 requires compliance with Permit Condition 1.7. The compliance demonstration methodology for Permit Condition 4.1 is more stringent than Permit Condition 1.8 by requiring more frequent visible emissions inspections (i.e. weekly versus monthly).

### **5.3.2.2 Monitoring, Recordkeeping, and Reporting**

Refer to Permit Condition 4.6. The provisions of Permit Condition 4.6 are similar to those of Permit Condition 1.8 except for the frequency of monitoring. Permit Condition 4.6 requires more frequent monitoring as a means to assure reasonable compliance with IDAPA 58.01.01.625. In addition, Permit Condition 4.12 requires the development of an O&M manual that contains the operating and maintenance specifications for the applicable process equipment and control equipment. Operating within these specifications will reasonably assure compliance with IDAPA 58.01.01.625.

### **5.3.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.703, 4/5/00]**

#### **5.3.3.1 Applicability**

Refer to Permit Condition 4.2. Process weight is an applicable permit requirement in Permit No. 1020-0001 dated 1/1/84.

#### **5.3.3.2 Monitoring, Recordkeeping, and Reporting**

Refer to Permit Conditions 4.4, 4.7, 4.8, 4.9, 4.11, and 4.12.

The following permit conditions are required to reasonably assure compliance with the process weight limitation (Permit Condition 4.2):

- Conduct a compliance test within 12 months of permit issuance (Permit Condition 4.4).
- Monitor and record the process weight input rate (process weight) to each dryer monthly (Permit Condition 4.7).
- Install, operate, calibrate, and maintain monitoring devices to measure the scrubber water flow rate and pressure drop across the multiclone (Permit Condition 4.8).
- Inspect the control equipment annually and repair as necessary (Permit Condition 4.9).
- Collect and analyze a combined concentration of suspended particulate and TDS (mg of particulate/liter of water) in the scrubber's recirculated water (Permit Condition 4.11).
- Develop, submit for review and approval, and operate under the conditions contained in an O&M manual (Permit Condition 4.12).

#### **5.3.3.3 Compliance Testing**

A compliance test is required within 12 months of permit issuance and is to be conducted according to IDAPA 58.01.01.157 and Permit Condition 1.20. A compliance test protocol is encouraged.

#### **5.3.3.4 Pulp Dryer Production Rate Monitoring**

Permit Condition 4.7 is a requirement of Permit No. 1480-0001, and is therefore, an applicable requirement under Title V. Until that permit is amended or modified, TASCO is subject to the throughput monitoring and recordkeeping requirement.



## 5.4 Emissions Unit 4 - Pellet Cooling

### 5.4.1 Emissions Unit Description

Emissions Unit Group 4 consists of the process equipment and related emissions control equipment as listed in the following table.

**Table 5.5 EMISSIONS UNIT 4 - PELLET COOLING**

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emission Control Device
P-D3	7.4 tons of pellet per hour pellet cooler #1 (S-D3)	Cyclone A-D3
P-D4/5	7.4 tons of pellet per hour pellet cooler #2 (S-D4)	Cyclone A-D4/5
	7.4 tons of pellet per hour pellet cooler #3 (S-D5)	

The pellet coolers are all manufactured by California Pellet Mill (model 2GA3). Emissions from the pellet coolers consist of PM and PM<sub>10</sub>. The three pellet coolers' emissions are controlled by two cyclones.

The stack parameters for Pellet Cooler #1 are as follows:

Stack Height:	79 ft
Stack Diameter:	4 ft
Stack Flow Rate:	11,000 acfm
Stack Exit Temperature:	110°F

The stack parameters for Pellet Coolers #2 and #3 (a common stack) are as follows:

Stack Height:	79 ft
Stack Diameter:	4 ft
Stack Flow Rate:	22,000 acfm
Stack Exit Temperature:	110°F

Per information provided by TASCOS on March 2, 1999, each pellet cooler's design process weight is 7.4 T/hr.

### 5.4.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]

#### 5.4.2.1 Applicability

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

#### 5.4.2.2 Monitoring, Recordkeeping, and Reporting

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

### 5.4.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.703, 4/5/00]

#### 5.4.3.1 Applicability

Refer to Permit Condition 5.1.

#### 5.4.3.2 Monitoring, Recordkeeping, and Reporting

No underlying requirement is more stringent than the process weight PM emission limitation. The PM emissions from the process equipment are controlled; therefore, the process weight PM emissions limitation should never be exceeded. Consequently, no throughput monitoring and recordkeeping is required for compliance purposes.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCO develop an O&M manual within one year of issuance, and submit it to DEQ. TASCO is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

### 5.5 Emissions Unit 5 - Lime Kilns

Table 5.6 Emissions Unit 5 - Lime Kilns

Emission Point/Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-K1/2A, P-K1/2B, and P-K1/2C; and/or P-K1/2D, P-K1/2E, and P-K1/2F	362 tons lime rock per day natural gas-fired lime kiln; 0.93 million cubic feet of natural gas per day gas kiln (S-K1)	Two gas washers (A-K1) in series and three carbonation tanks (A-K1/2) in parallel
P-K1/2A, P-K1/2B, & P-K1/2C;	168 tons lime rock per day coke-fired lime kiln;	Two gas washers (A-K2A) in series and three carbonation tanks (A-K1/2) in parallel
P-K2B	12 tons coke per day coke kiln (S-K2)	One by-pass scrubber (A-K2B) while charging the kiln

The process weight rate limitation is applied to each process in Emissions Unit Group 5 individually.

#### 5.5.1 Emissions Unit Description

The gas kiln, manufactured by Union Carbide and rated at 200 tons, was installed prior to 1970. Emissions from the gas kiln include PM, PM<sub>10</sub>, SO<sub>x</sub>, CO, NO<sub>2</sub>, VOCs, and HAPs.

The coke kiln, manufactured by Larowe Construction and is a 100-ton Belgium model, was also installed prior to 1970. Emissions from the coke kiln include PM, PM<sub>10</sub>, SO<sub>x</sub>, CO, NO<sub>2</sub>, VOCs, and HAPs.

The parameters for the gas kiln stack are as follows:

Stack Height:	72 ft
Stack Diameter:	3.5 ft
Stack Flow Rate:	3,000 acfm
Stack Exit Temperature:	120°F

The parameters for the coke kiln stack are as follows:

Stack Height:	79 ft
Stack Diameter:	3 ft
Stack Flow Rate:	5,000 acfm
Stack Exit Temperature:	60°F

## Coke Kiln

Approximately 92.5% of the exhaust gas from the coke kiln is pulled from the top of the kiln. The exhaust gas passes through two gas washers (A-K2A), which are used to scrub and cool the exhaust gas on its way to the compressor. The compressor conveys the CO<sub>2</sub> gas to the first and second carbonation tanks (A-K1/2) where the gas is bubbled through the carbonation tanks from the bottom up.

Approximately 7.5% of the exhaust gas from the coke kiln bypasses the gas washers and is sent to the charging scrubber (A-K2B). When charging the coke kiln with lime rock and coke mixture, a dumper opens to the charging scrubber and the exhaust fan starts.

## Gas Kiln

Exhaust gas from the gas kiln is pulled from the top of the kiln. The exhaust gas passes through two gas washers (A-K1), which are used to scrub and cool the exhaust gas on its way to the compressor. The compressor conveys the CO<sub>2</sub> gas to the first and second carbonation tanks (A-K1/2), where the gas is bubbled through the carbonation tanks from the bottom up. All of the CO<sub>2</sub> gas compressors are tied into a common discharge header that feeds into the carbonation system. In order to maintain the pressure set point for the compressors in the discharge header, a small portion of the gas kiln exhaust can be vented through a series of three vents. Each of the three vents has automatic control valves installed. From the operations standpoint, the least amount of venting is desirable because exhaust gas venting is associated with a fuel loss. Toward the end of the beet campaign, when the quality of the beets deteriorates, the lime kilns do not generate enough gas CO<sub>2</sub> for the carbonation system. Liquid CO<sub>2</sub> is purchased to supplement the demand for carbonation. In this case, all of the exhaust vent's valves are closed. It is estimated that up to 30% of exhaust gas is vented through the exhaust vents.

### **5.5.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]**

#### **5.5.2.1 Applicability**

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

#### **5.5.2.2 Monitoring, Recordkeeping, and Reporting**

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

### **5.5.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702, 4/5/00]**

#### **5.5.3.1 Applicability**

Refer to Permit Condition 6.1.

#### **5.5.3.2 Monitoring, Recordkeeping, and Reporting**

No underlying requirement is more stringent than the process weight PM emission limitation. The PM emissions from the process equipment are controlled; therefore, the process weight PM emissions limitation should never be exceeded. Consequently, no throughput monitoring and recordkeeping is required for compliance purposes.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASC0 develop an O&M manual within one year of issuance, and submit it to DEQ. TASC0 is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

## 5.6 Emissions Unit 6 – Flame Slaker and Process Slaker (S-K3)

### 5.6.1 Emissions Unit Description

**Table 5.7 EMISSIONS UNIT 6 – FLAME SLAKER AND PROCESS SLAKER (S-K3)**

Emission Point/ Source Identification	Emissions Unit(s) Identification	Emissions Unit(s) Identification	Emission Control Device
P-K3	Total 367 tons of CaO per day	Flume slaker (S-K3)	One spray-chamber type scrubber
		Process slaker (S-K3)	

The facility operates two lime slakers to produce milk of lime from crushed calcium oxide (CaO) rocks and water. Lime slakers are continuous processes, per information in comments #21 in TASCO Comments for Tier I Draft Permit Mini-Cassia Facility, dated September 17, 2002. The total production rate is 367 tons of CaO per day, per the applicant. The lime slakers were manufactured by TASCO and installed in 1987. Slaker emissions are controlled by a common spray-chamber type scrubber. The updated flow diagram can be found in the public comment package.

The parameters for the lime slakers' stack are as follows:

Stack Height:	26 ft
Stack Diameter:	2.0 ft
Stack Flow Rate:	15,000 acfm
Stack Exit Temperature:	80°F

### 5.6.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]

#### 5.6.2.1 Applicability (Permit Condition 7.1)

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

#### 5.6.2.2 Monitoring, Recordkeeping, and Reporting

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

### 5.6.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702, 4/5/00]

#### 5.6.3.1 Applicability

Refer to Permit Condition 7.1.

#### 5.6.3.2 Monitoring, Recordkeeping, and Reporting

No underlying requirement is more stringent than the process weight PM emission limitation. The PM emissions from the process equipment are controlled; therefore, the process weight PM emissions limitation should never be exceeded. Consequently, no throughput monitoring and recordkeeping is required for compliance purposes.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCO develop an O&M manual within one year of issuance, and submit it to DEQ. TASCO is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

## **5.7 Emissions Unit 7 - Drying Granulator**

### **5.7.1 Emissions Unit Description**

**Table 5.8 EMISSIONS UNIT 7 - DRYING GRANULATOR**

<b>Emission Point/Source Identification</b>	<b>Emissions Unit(s) Identification</b>	<b>Emission Control Device</b>
P-W1	65 T/hr drying granulator (S-W1)	Scrubber

#### **5.7.1.1 Drying Granulator**

The facility operates a drying granulator to dry wet sugar. The drying granulator was manufactured by TASCO and installed prior to 1952. Emissions from the drying granulator are controlled by a dust box type scrubber. The production rate of the drying granulator is 65 T/hr, per the applicant.

The parameters for the drying granulator's stack are as follows:

Stack Height:	85 ft
Stack Diameter:	2.5 ft
Stack Flow Rate:	15,000 acfm
Stack Exit Temperature:	90°F

#### **5.7.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]**

##### **5.7.2.1 Applicability**

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

##### **5.7.2.2 Monitoring, Recordkeeping, and Reporting**

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

#### **5.7.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702, 4/5/00]**

##### **5.7.3.1 Applicability**

Refer to Permit Condition 8.2.

##### **5.7.3.2 Monitoring, Recordkeeping, and Reporting**

No underlying requirement results in a more stringent PM limitation than the process weight PM emission limitation. The PM emissions from the emissions unit are controlled; therefore, the process weight PM emissions limitation will never be exceeded. Consequently, no monitoring and recordkeeping is required for compliance purposes.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCO develop an O&M manual within one year of issuance, and submit it to DEQ. TASCO is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

## **5.8 Emissions Unit 8 - Cooling Granulators**

### **5.8.1 Emissions Unit Description**

The following table lists the emissions units for the Cooling Granulators Emissions Unit Group.

**Table 5.9 EMISSIONS UNIT 8 - COOLING GRANULATORS**

<b>Emission Point Identification</b>	<b>Emissions Unit(s)/ Process(es)</b>	<b>Emission Control Device</b>
P-W2	65 T/hr No. 1 Cooling Granulator (S-W2)	Baghouse
P-W3	65 T/hr No. 2 Cooling Granulator (S-W3)	Baghouse

The facility operates two cooling granulators to cool hot sugar from the drying granulator. Each has a process weight input rate of 65 T/hr. The No. 1 Cooling Granulator was manufactured by TASC0 and installed prior to 1952. Emissions from the No. 1 Cooling Granulator are controlled by a Dalmatic Baghouse. The No. 2 Cooling Granulator was manufactured by FMC and installed on April 26, 1982. Emissions from the No. 2 Cooling Granulator are controlled by another Dalmatic Baghouse.

The parameters for the No. 1 Cooling Granulator's stack are as follows:

Stack Height:	69 ft
Stack Diameter:	2.3 ft
Stack Flow Rate:	16,000 acfm
Stack Exit Temperature:	80°F

The parameters for the No. 2 Cooling Granulator's stack are as follows:

Stack Height:	49 ft
Stack Diameter:	3.3 ft
Stack Flow Rate:	16,000 acfm
Stack Exit Temperature:	70°F

## **5.8.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625, 4/5/00]**

### **5.8.2.1 Applicability**

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

### **5.8.2.2 Monitoring, Recordkeeping, and Reporting**

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

## **5.8.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702, 4/5/00]**

### **5.8.3.1 Applicability**

Refer to Permit Condition 9.1 and 9.2. Permit Condition 9.1 applies to the No. 1 cooling granulator, which was installed prior to October 1, 1979. Permit Condition 9.2 applies to the No. 2 cooling granulator, which was installed after October 1, 1979.

### 5.8.3.2 Monitoring, Recordkeeping, and Reporting

The baghouses used in this process primarily collect product (i.e. process equipment), but they also act as control equipment, which is an environmental benefit. Due to their high collection efficiency (+99% for PM<sub>10</sub> in most cases), coupled with the financial benefit of operating them optimally (little loss of saleable product), the PM emissions will never exceed the process weight PM emissions limitation.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCO develop an O&M manual within one year of issuance, and submit it to DEQ. TASCO is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

## 5.9 Emissions Unit 9 - Sugar Handling

Table 5.10 EMISSIONS UNIT 9 - SUGAR HANDLING

Emission Point/ Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-W4	Process sugar handling system with ventilation of 16,600 acfm to a baghouses (process S-W4)	Baghouse
P-W5	Bulk loadout sugar-handling system with ventilation of 17,000 acfm to a baghouses (bulk loadout S-W5)	Baghouse

### 5.9.1 Emissions Unit Description

Particulate matter is emitted from process sugar handling and sugar handling bulk loading systems. The process sugar-handling system was installed in 1967. Emissions come from elevators, scrolls, tote loading, screen stations, bagging stations, and scales. They are controlled by a Pulsair baghouse (per TASCO's 1995 Tier I operating permit application). Sugar-handling procedures for bulk loading were last modified in 1994. Emissions come from elevators, scrolls, bulk loading, remelt collection tank, and remelt dumping. They are controlled by a Mircopulsair Co. baghouse (per TASCO's 1995 Tier I application).

Each baghouse stack parameters are listed below:

#### Process sugar-handling stack (P-W4)

Stack Height: 72 ft  
Stack Diameter: 5.0 ft  
Stack Flow Rate: 16,600 acfm  
Stack Exit Temperature: 70°F

#### Bulk loading sugar-handling stack (P-W5)

Stack Height: 23 ft  
Stack Diameter: 3.0 ft  
Stack Flow Rate: 17,000 acfm  
Stack Exit Temperature: 60°F

### 5.9.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625]

#### 5.9.2.1 Applicability

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

#### **5.9.2.2 Monitoring, Recordkeeping, and Reporting**

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

#### **5.9.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702, 4/5/00]**

##### **5.9.3.1 Applicability**

Refer to Permit Condition 10.1.

##### **5.9.3.2 Monitoring, Recordkeeping, and Reporting**

The baghouses used in this process primarily collect product (i.e. process equipment), but they also act as control equipment, which is an environmental benefit. Due to their high collection efficiency (+99% for PM<sub>10</sub> in most cases), coupled with the financial benefit of operating them optimally (little loss of saleable product), the PM emissions will never exceed the process weight PM emissions limitation.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCOS develop an O&M manual within one year of issuance, and submit it to DEQ. TASCOS is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

#### **5.10 Emissions Unit 10 - Lime Kiln Building Material Handling Baghouses**

Emissions Unit Group 10 consists of four lime kiln building material handling baghouses. See Table 11.1 in the permit.

##### **5.10.1 Emissions Unit Description**

There are four lime kiln building material handling baghouses. On the top floor is a grouping of three small baghouses, and on the second and third floors is a mid-sized baghouse.

#### **5.10.2 Permit Requirement - Visible Emissions - [IDAPA 58.01.01.625]**

##### **5.10.2.1 Applicability**

The permittee is required to comply with Permit Conditions 1.7 and 1.8.

##### **5.10.2.2 Monitoring, Recordkeeping, and Reporting**

Maintaining the control equipment in good working order, operating according to the O&M manual, and conducting periodic visible emissions inspections assures reasonable compliance with IDAPA 58.01.01.625.

#### **5.10.3 Permit Requirement - Process Weight - [IDAPA 58.01.01.702]**

##### **5.10.3.1 Applicability**

See Permit Conditions 11.1. The process weight rate limitation is applied to each process in emissions unit group 10 individually.



### **5.10.3.2 Monitoring, Recordkeeping, and Reporting**

The baghouses used in this process primarily collect product (i.e. process equipment), but they also act as control equipment, which is an environmental benefit. Due to their high collection efficiency (+99% for PM<sub>10</sub> in most cases), coupled with the financial benefit of operating them optimally (little loss of saleable product), the PM emissions will never exceed the process weight PM emissions limitation.

To reasonably assure compliance with IDAPA 58.01.01.702, the permit requires TASCOS develop an O&M manual within one year of issuance, and submit it to DEQ. TASCOS is required to maintain and operate the process equipment and control equipment according to the O&M manual's specifications.

## **6. INSIGNIFICANT ACTIVITIES**

Appendix C of the Tier I permit application lists the proposed insignificant sources. These activities/sources have been declared insignificant in accordance with IDAPA 58.01.01.317.01.(a) and/or (b), per the application. These emissions units are not listed in the Tier I operating permit, but are incorporated here by reference. While there are no specific monitoring requirements in the permit for insignificant emissions units at this facility, these units must comply with all applicable federal, state, and local requirements.

## **7. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION**

### **7.1 Compliance Plan**

Pursuant to the information submitted by TASCOS in the March 31 and August 4, 1995 Tier I operating permit (Tier I) applications, and as confirmed upon review of documentation reviewed during the drafting of this permit, TASCOS has not obtained permits to construct (PTCs) for construction and/or modification of all emission sources at the facility in accordance with IDAPA 58.01.01.200 through 223. The following sources were specifically identified that were required to, but did not obtain, a PTC:

The third, fourth, and fifth evaporators replaced prior to the 2001 beet campaign.  
The sixth evaporator constructed in 2002.

In addition, the permittee has the continuing responsibility to submit any supplementary information needed, including information for any other sources, in accordance with IDAPA 58.01.01.315.

Because these sources have been constructed and/or modified without a permit, the Department has determined that the most appropriate course of action to bring the facility into compliance with the requirements is to issue a single facility-wide permit that:

- (a) Specifically establishes the operating terms and conditions required by the PTC rules for sources for which a permit was required but not obtained; and
- (b) Collectively addresses the operating terms and conditions required to demonstrate that emissions from all sources at the facility will not contribute to the violation of an applicable standard.

The Department is, therefore, requiring a combined Tier II operating permit (Tier II) and PTC (hereafter referred to as the facility-wide permit). The Tier II for TASCOS is required in accordance with IDAPA 58.01.01.401.03 based on the determination that specific emission standards, or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or rule. The facility-wide permit will contain the terms and conditions necessary for the facility to comply with the applicable requirements of IDAPA 58.01.01.400 through 410.

The facility-wide permit will also include all of the terms and conditions for new or modified sources. For those sources within the facility that have existing PTCs, the terms and conditions will be incorporated into the new permit. For sources at the facility for which a PTC was required but not obtained, the permit will establish new emission limits, controls, and other requirements in accordance with the applicable portions of IDAPA 58.01.01.200 through 223. The new facility-wide permit will address all applicable emission standards, required emission control technology, and demonstrate that the facility will not cause or contribute to any ambient air quality standard or applicable prevention of significant deterioration (PSD) increment.

The combined Tier II and PTC is different than, and separate from, the Tier I in that the new permit will establish new applicable emission limits, controls, and other requirements that are as stringent as the requirements contained in or enforceable under the state implementation plan. This permit will create new underlying requirements for sources that are in existence at the time the initial Tier I is issued. A Tier I permit modification will, therefore, need to be issued concurrently with the issuance of the new facility-wide permit.

The applicable requirements established in the facility-wide permit pursuant to IDAPA 58.01.01.200 through 223 shall be clearly identified as such in the permit and shall remain in full force and effect until such time as they are modified or terminated in accordance with the procedures for issuing a PTC.

The specific compliance schedule elements and milestones to achieve compliance are described below.

Permit Condition 13.2. The permittee will be required to submit a complete permit application with all supporting information and documentation for issuance of a facility-wide permit in accordance with IDAPA 58.01.01.400 through 410 no later than 180 days from the final issuance date of the Tier I. A facility-wide permit is required by the Department to establish the terms and conditions necessary to comply with an applicable rule or standard. The Department shall consider the emissions from all sources at the facility and the specific requirements for individual sources in preparing the facility-wide operating permit.

The permit application shall clearly identify all emissions units at the facility - listing currently permitted emissions units, exempted units for which the facility maintains exemption documentation, units constructed before and not modified since January 24, 1969, and units constructed and/or modified since January 24, 1969 without a permit or construction approval from the Department. Application information shall provide facility information and emissions data for all emissions units in accordance with IDAPA 58.01.01.402 and 403 and shall include a demonstration that the sources at the facility will not cause or significantly contribute to a violation of the NAAQS or of any applicable PSD increment.

The application submittal deadlines have been set to reasonably accommodate updating and organizing the emissions unit descriptions and emissions data, and conducting ambient air quality modeling for all sources. Applications that are deemed or remain incomplete beyond the 180-day milestone shall constitute a violation of this permit condition.

Permit Condition 13.3. In addition to the information submitted under Permit Condition 13.2, the permittee is required to submit all of the information necessary to address the applicable requirements for PTCs in accordance with IDAPA 58.01.01.200 through 223 and the NSPS requirements in 40 CFR 60, Subpart KB for the construction and/or modification of sources for which the permittee was required but did not obtain a PTC. The information must include all information to address the additional permit requirements for new major facilities or major modifications where construction without enforceable limits may have triggered PSD or nonattainment new source review (NSR) requirements.

This data must be submitted with the complete permit application required under Permit Condition 13.2 in order to issue a single combined permit. The information is, therefore, due no later than 180 days from the final issuance date of the Tier I. Failure to include complete information for addressing the PTC requirements within the required timeframe shall constitute a violation of this permit condition.

Permit Condition 13.4. If through the development of the facility-wide permit, any other source or sources are identified that should have obtained a PTC or PTC modification and for which the applicant did not include the information under Permit Condition 13.3, a supplemental application that contains all of the information necessary to address the applicable requirements for PTCs in accordance with IDAPA 58.01.01.200 through 223 shall be submitted no later than 30 days after receiving written notification from the Department. Supplemental applications that are deemed or remain incomplete beyond the 30-day milestone shall constitute a violation of this permit condition.

Permit Condition 13.5. If the permittee can clearly demonstrate that the data required for the facility-wide permit cannot be collected and organized within the specified timeframe, the permit application submittal deadlines may be extended at the discretion of the Department for a specific time period not to exceed one year. For the Department to consider a request for an extension without jeopardizing the terms and conditions of the permit, the request must be submitted by the facility no later than the midpoint of the compliance milestone timeline. The request must be submitted in writing with a clear demonstration why the data cannot reasonably be submitted within the specified timeframe. An example of information that might justify an extension is the absence of ambient monitoring data required to complete a PSD application.

The Department will review the request and the justification and approve or disapprove the extension in writing. The responsibility for meeting the schedule if the Department has not issued a written extension belongs to the permittee.

Permit Condition 13.6. The Department intends to draft and issue a single facility-wide permit to bring the permittee back into compliance. This permit will fully meet all of the applicable requirements in the *Rules* and the federally approved state implementation plan. Because the permit will contain both elements of PTCs and of Tier II permits, it will clearly identify the origin and basis for each term and condition. The terms and conditions established pursuant to the PTC requirements shall be clearly marked and shall not expire with any Tier II operating permit term. The terms and conditions established pursuant to the Tier II requirements shall be clearly marked and shall be implemented in accordance with the Tier II process. The procedures for issuing a PTC in IDAPA 58.01.01.209 shall be followed concurrently with the procedures for issuing a Tier II in IDAPA 58.01.01.404. The permit shall clearly state that any future modification of a term or condition in the permit shall be subject to the appropriate procedural requirements on which the original term or condition was based.

Permit Condition 13.7. Within 30 days after the Department determines the facility-wide permit application complete, the permittee will need to request a significant permit modification to the Tier I in accordance with IDAPA 58.01.01.382.02. A significant Tier I modification will require the payment of fees in accordance with IDAPA 58.01.01.389.06.b.iii. Because the information in a complete application as required under Permit Condition 13.2 and 13.3 should contain all of the technical information necessary to modify the Tier I, the Department may waive portions of the standard application requirements as appropriate provided the permittee certifies the completeness, truth, and accuracy of all documents submitted.

The Tier I modification shall be processed concurrently with the facility-wide permit in accordance with the procedures for issuing a Tier I in IDAPA 58.01.01.360 through 369.

Permit Condition 13.8. The permittee shall be required to submit a progress report at the end of each calendar quarter (January 1, April 1, July 1, and October 1) of each year stating when each of the conditions of each milestone were or will be achieved. A detailed explanation is required when milestones were not or will not be achieved in accordance with the schedule.

Permit Condition 13.9. The incorporation of the compliance schedule into the Tier I operating permit does not sanction noncompliance with the applicable rules.

## 7.2 Compliance Certification

TASCO will be required to periodically certify compliance in accordance with General Permit Provision 14.21.

## 8. REGISTRATION FEES

This facility is a major facility as defined by IDAPA 58.01.01.008.10; therefore, registration and registration fees, in accordance with IDAPA 58.01.01.387, apply.

## 9. AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS) FACILITY SUBSYSTEM

The information contained in the AIRS database does not need to be updated because this permitting action does not change any emissions units, emissions, or processes at the facility.

AIRS/AFS<sup>1</sup> FACILITY-WIDE CLASSIFICATION<sup>2</sup> DATA ENTRY FORM

Air Division Description	SIP	PSD	NESHAP	NSPS	MACT	TITLE	AREA CLASSIFICATION
							A – Attainment U – Unclassifiable N – Nonattainment
SO <sub>2</sub>	A	A				A	U
NO <sub>x</sub>	A	A				A	U
CO	A	A				A	U
PM <sub>10</sub>	A	A				A	A
PM	A	A				A	U
VOC	B					B	U
Total HAPs	A					A	
Acetaldehyde	A					A	

<sup>1</sup> Aerometric Information Retrieval System/AIRS Facility Subsystem

<sup>2</sup> AIRS/AFS classification codes

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

## 10. RECOMMENDATION

Based on the Tier I operating permit application and review of the federal regulations and state rules, staff recommends DEQ issue final Tier I operating permit No. 067-00001 to TASCO for their facility located in Paul.

cc: Stephen VanZandt, Twin Falls Regional Office  
Laurie Kral, EPA - Region 10  
Sherry Davis, Air Quality Division

SYC:BR/sd G:\Air Quality\Stationary Source\SS Ltd\T\TASCO Paul\Final\T1-9503-039-1 Final TM.doc

Attachments

**APPENDIX A**  
**Emissions Calculation Spreadsheet**  
**Technical Memorandum, TASCO, Paul**

TASCO, Paul - HAPs, Per Tier I Application Dated February 3, 1999.								
HAPs (T/yr)	B&W Boiler	Eric City Boiler	South Dryer	North Dryer	Gas Kiln	Coke Kiln	Main Mill	Total
Lead	9.30E-05	2.80E-02	1.00E-02	1.20E-02		1.10E-03		0.05
Acetaldehyde		3.80E-02	2.8	3.24	4.40E-03		28	34.08
Acrolein		1.60E-02	2	2.32	1.90E-03		1.70E-01	4.51
Arsenic	1.50E-02	2.50E-01	9.20E-02	1.10E-01		9.30E-03		0.48
Benzene		1.90E-02	5.50E-03	6.26E-03	2.30E-03			0.03
Beryllium	6.20E-03	2.70E-03	9.90E-04	1.10E-03		1.00E-04		0.01
Cadmium	1.20E-03	1.20E-03	4.30E-04	5.00E-04		4.40E-05		0.00
Chromium	2.30E-01	1.50E-01	5.40E-02	6.20E-02		5.60E-03		0.50
Formaldehyde		4.40E-02	2	2.34	5.00E-03		3.7	8.09
Manganese	1.30E-01	1.80E-02	6.40E-03			6.70E-04		0.16
Mercury	2.00E-04	1.00E-01	3.60E-02			3.80E-03		0.14
Methyl ethyl ketone			1.00E+00	1.2			2.60E-03	2.20
Naphthalene		2.70E-01	7.60E-02	8.67E-02	3.10E-02			0.46
Nickel	3.30E-01	7.10E-02	2.60E-02	3.00E-02		2.70E-03		0.46
POM (Polycyclic organic matter)	3.40E-02	2.70E-02	7.60E-03	1.95E-03	3.10E-03	1.70E-04		0.07
Propylene		3.00E-01	8.50E-02	9.64E-02	3.40E-02			0.52
Toluene		6.40E-03	1.80E-03	2.07E-03	7.30E-04			0.01
Xylenes		2.40E-03	6.80E-04	7.71E-04	2.70E-04			0.00
<b>Total</b>								<b>51.78</b>

TASCO, Paul - Pollutants, Per Tier I Application Dated February 3, 1999.																		
Tons/yr	---Boilers---		---Dryers---		---Pellet Coolers---			---Granulators---			---Kilns---		Process Slaker	---Sugar handling---		Main Mill	Sulfur Stove	Total
	B&W	Erie City	South	North	No. 1	No. 2	No. 3	Drying No. 1	Cooling No. 1	Cooling No. 2	Union Carbide	Belgium		Process	Bulk Loading			
PM	258	272	194	199	62.6	62.6	62.6	117	117	117	79	66	64	118	118			1906.8
PM <sub>10</sub>	258	272	194	199	62.6	62.6	62.6	117	117	117	79	66	64	118	118			1906.8
SO <sub>2</sub>	1012	1051	888	1042							0	3.3					40.1	4036.4
CO	291	59	150	175							4565	2116						7356
NO <sub>x</sub>	809	1314	303	260							24	3.2						2713.2
VOC	4.1	4.3	15	18							0.48	0.2				40		82.08

**APPENDIX B**  
**Response to Comments**  
**Technical Memorandum, TASCO, Paul**

October 24, 2002

**STATE OF IDAHO  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
RESPONSE TO PUBLIC COMMENTS  
ON DRAFT AIR QUALITY TIER I OPERATING PERMIT  
FOR THE AMALGAMATED SUGAR COMPANY, PAUL, IDAHO**

**Introduction**

As required by IDAPA 58.01.01.364 of the *Rules for the Control of Air Pollution in Idaho (Rules)*, the Idaho Department of Environmental Quality (Department) provided an opportunity for public notice and comment, including a public hearing, on the draft Tier I operating permit for The Amalgamated Sugar Company's (TASCO), Paul, Idaho, facility. Public comment packages, which included the application materials, draft permit, and technical memorandum, were made available for public review at the Paul Public Library, the Department's Twin Falls Regional Office, and the Department's State Office in Boise. A copy of the draft permit and technical memorandum was also posted on the Department's Web site. The public comment period was provided from August 15, 2002, through September 17, 2002. A public hearing was held on September 16, 2002, in Rupert City Hall. Written comments were received from residents of the Rupert area, the Idaho Conservation League, and TASCO. Those comments regarding the air quality aspects of the permits are provided below with the Department's response immediately following.

**Public Comments and Department Responses**

**Comment 1:**                    **Fugitive Emissions (Permit Condition 1.2; Technical Analysis 4.2.1.2)**

TASCO submitted a comment requesting the frequency monitoring requirement be deleted from Permit Condition 1.2 and to have Permit Condition instead read, *"The permittee shall maintain records of the methods used (e.g., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions."*

**Response to 1:**            To reasonably assure compliance with IDAPA 58.01.01.650-651, sufficient monitoring and recordkeeping is required by IDAPA 58.01.01.322.06 and 07. The Department and the EPA have determined that monitoring and recording both the frequency and methods used to reasonably control fugitive emissions provide the sufficient monitoring and recordkeeping required for Tier I operating permit compliance purposes. Consequently, the permit and technical memorandum have not been changed in response to this comment.

**Comment 2:**                    **Visible Emissions (Permit Condition 1.7)**

TASCO submitted a comment asking, *"[If] NO<sub>x</sub> is present in the flue gas, at what level is NO<sub>x</sub> negligible to obtain an accurate visible emissions inspection?"*

**Response to 2:**            Permit Condition 1.7 excludes applicability to IDAPA 58.01.01.625 when the presence of uncombined water, nitrogen oxides, and/or chlorine gases are the only reasons for the failure of the emission to comply with the visible emissions standard. Hence, NO<sub>x</sub> at any level in the flue gas is exempt from the emissions standard.



**Comment 3:**

**Visible Emissions (Permit Condition 1.8)**

TASCO submitted a comment requesting the following:

1. Clarify that Permit Condition 1.8 only applies to emission units without specific visible monitoring in their respective sections.
2. State that Permit Condition 1.8 applies to all major emissions unit group sources
3. Delete "*The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625*" from Permit Condition 1.8. Since the plumes from the boiler stacks and the dryer stacks are combined, it is difficult to distinguish visible emissions from each specific boiler or dryer stack.

**Response to 3:**

3.1 The first sentence of Permit Condition 1.8 has been changed in response to Comment No. 3. Permit Condition 1.8 now reads: "*The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions that are not covered by Permit Conditions 2.6, 3.7, and 4.6 during daylight hours and under normal operating conditions . . .*"

3.2 Permit Condition 1.8 applies to all point source at the facility, regardless of major or minor source status. It just so happens the boilers and dryers have specific visible emissions compliance demonstration methods that apply differently than Permit Condition 2.8. For this reason, Permit Condition 2.8 was changed as requested and as noted in Response to Comment 3.1 above. Hence, the permit has not been changed as requested in Comment 3.2.

3.3 This requirement applies to all potential sources except for boilers and dryers, and contains the monitoring and recordkeeping provision to reasonably assure compliance with IDAPA 58.01.01.625.

**Comment 4:**

**Reports and Certifications (Permit Conditions 1.10 and 14.24)**

TASCO submitted a comment requesting the Department remove General Provisions Permit Condition 14.24 and the semiannual reporting requirement in Permit Condition 1.10.

**Response to 4:**

Semiannual monitoring reporting is required by Idaho and federal regulation and is part of the primary compliance assurance methods of the Title V operating permit program. These requirements cannot be removed from the permit as requested.

**Comment 5:**

**Monitoring and Recordkeeping (Permit Conditions 1.11, 2.7, 3.8, and 4.8)**

1. TASCO requested a detailed reporting protocol as mutually agreed upon for all monitoring records and support information.
2. TASCO described that continuous monitoring of many data points was done electronically. The data logging capabilities of the equipment maintains a history of the data points for a period of one month. The daily, weekly, and monthly

monitoring of these data points is recorded in log books and maintained. TASC0 believes this is sufficient documentation for continuous monitoring.

Response to 5:

5.1 In accordance with IDAPA 58.01.01.322.11, 322.15, 322.08.c, and 130-136, TASC0 is required to submit an annual compliance certification, semiannual reports for all monitoring required by the permit, and deviation and excess emissions reports, respectively.

5.2 The Department concurs with TASC0. It appears TASC0 is doing what is required by Permit Condition 1.11.

Comment 6:

Test Methods (Permit Conditions 1.15, 2.4, 3.5, and 4.4)

TASC0 submitted a comment requesting that EPA Method 5B be added as an approved method to measure PM in aforementioned permit conditions and that appropriate revisions also be made to the technical memorandum.

Response to 6:

The Department concurs with TASC0 and has added EPA Method 5B to Table 1.2 in the proposed permit as the PM reference test method for the B&W boiler and Erie City boiler when coal-fired. In addition, EPA Method 5B was added to Permit Conditions 1.15, 2.4, and 3.5 for these boilers.

The Department does not concur with TASC0 at this time that Method 5B is the appropriate test method for the coal-fired dryers. As discussed in EPA Method 5B, Section 1.1, Applicability, *"This method is to be used for determining nonsulfuric acid particulate matter from stationary sources. Use of this method must be specified by an applicable subpart, or approved by the Administrator, U.S. Environmental Protection Agency, for a particular application."* Testing conducted without Department approval is done solely at the permittee's risk. The Department therefore recommends TASC0 submit a performance test protocol for any testing to assure the chosen test method is appropriate.

Comment 7:

Sulfur Content (Permit Conditions 1.16, 1.16.1; Technical Analysis 4.2.9.1)

TASC0 submitted a comment requesting Permit Conditions 1.16 and 1.16.1 be removed because TASC0 no longer uses fuel oil as a fuel source of the boilers or any other piece of equipment at the facility.

Response to 7:

There is not enough information to determine whether the boilers and the equipment are disabled and cannot use fuel oil anymore, or if TASC0 has chosen not to use the fuel oil at this time. The boiler and the equipment may still have the ability to use fuel oil. No change will be made to the permit until more supporting information is provided.

Comment 8:

Compliance Testing (Permit Condition 1.20)

TASC0 requested a 60-day requirement for submission of source test results after completion of the test. The draft Tier I permit specifies 30 days.

Response to 8:

In accordance with IDAPA 58.01.01.157.04, any source test performed to satisfy a requirement imposed by a state permit must be submitted to the Department within 30 days of completion of the test. Therefore, these permit conditions have not been changed. If TASC0 finds that it needs more than 30 days to submit the results of a performance test, it may request that the Department grant an extension.

**Comment 9:**

**Permit Limits/Operating Requirements (Permit Conditions 2.3, 3.4, and 4.3)**

1. **TASCO submitted a comment requesting the pressure drop operating range requirements of the multiclone be deleted.**
2. **TASCO submitted a comment requesting the requirements of particulate concentrations of the scrubber water be deleted from Permit Conditions 2.3, 3.4, and 4.3.**
3. **TASCO submitted a comment requesting the corrective action requirements in Permit Conditions 2.3, 3.4, and 4.3 be removed when the pressure drops of the multiclones are not within the allowable operating ranges specified in these permit conditions.**
4. **TASCO submitted a comment requesting the corrective action requirements in Permit Conditions 2.3, 3.4, and 4.3 be removed when the total concentration of suspended particulate and total dissolved solids (TDS) in the recirculated water of the wet scrubber is above the allowable value specified in these permit conditions.**
5. **TASCO submitted a comment requesting "*All deviations shall be reported in accordance with Permit Conditions 1.9 and 14.25*" be deleted from Permit Conditions 2.3, 3.4, and 4.3.**

**Response to 9:**

9.1 No change was made to Permit Conditions 2.3, 3.4, or 4.3 in response to Comment No. 9.1. The PM emissions from each boiler are controlled by a multiclone followed by a spray-chamber scrubber. Proper working conditions of the multiclone assure that its PM effluent concentration is within the design range of the PM concentration of the scrubber inlet stream. The proper fuel-to-air ratios for combustion determine the airflow across the multiclone, which in turn affects the pressure drop across the multiclone. Permit Conditions 2.12, 3.12, and 4.12 require that TASCO establish the appropriate operating ranges for the boilers and dryers, including their respective air pollution control devices, based on successful compliance testing. Once the ranges are established, TASCO is required to develop an O&M manual for the emissions units and control equipment and then submit the manual to the Department for review and approval. Permit Conditions 2.3, 3.4, and 4.3 state that deviations from the operating ranges may not by themselves be considered deviations from applicable emissions standards unless the Department determines that the frequency, duration, or magnitude of the deviations indicates that additional action is required.

9.2 No change was made to Permit Conditions 2.3, 3.4, or 4.3 in response to Comment No. 9.2. As discussed in *Air Pollution Control, A Design Approach* (C. David Cooper, Waveland Press, Inc. 1986, pp.190-191), it is necessary to keep the concentration of suspended particulates and TDS in the scrubber recirculated water below a certain level to prevent significant re-entrainment. TASCO's March 27, 1997, letter also indicated that TDS and suspended solids in the water affected the particulate emissions level. When both boilers are fired by coal, the emissions concentration tends to be higher because the scrubber-recirculated water contains more TDS and suspended particulates. Therefore, TASCO is required by the permit to monitor and record this parameter. Permit Conditions 2.12, 3.12, and 4.12 required that TASCO develop an initial O&M manual to establish appropriate operating ranges for the boilers and the dryers, including their respective control devices. Permit Conditions 2.3, 3.4, and 4.3 state that deviations from the operating ranges may not by themselves be considered deviations from applicable emissions standards unless the Department determines that the frequency, duration, or magnitude of the deviations indicates that additional action is required.

9.3 Changes have been made to Permit Conditions 2.3, 3.4, and 4.3 in response to Comment No. 9.3. As mentioned in Response to Comment No 9.1, the airflow across the multiclone is determined by proper fuel-to-air ratios for combustion. The pressure drop across the multiclone is used as an indicator of proper working condition. Inspecting the multiclone at least annually, or more frequently as needed as required in Permit Conditions 2.8, 3.9, and 4.11, and monitoring the pressure drop as required in Permit Conditions 2.7, 3.8, and 4.8 are reasonable permit condition to assure the multiclone is operating properly.

9.4 No change was made to the Permit Conditions 2.3, 3.4, and 4.3 in response to Comment No. 9.4. Refer to the Department's Response to Comment No. 9.2.

9.5 No change was made to Permit Conditions 2.3, 3.4, and 4.3 in response to Comment No. 9.5. Reporting deviations is required by IDAPA 58.0101.322.08.

**Comment 10:** **Compliance Testing (Permit Conditions 2.4, 2.9, 3.5, 3.10, 4.4, and 4.9)**

1. **TASCO submitted a comment requesting the related language of the pressure drop across the multiclone and the particulate concentration in scrubber recirculated water be deleted from the compliance testing permit conditions.**
2. **TASCO submitted a comment requesting the Permit Conditions 2.4, 3.5, and 4.4 be changed to read, *"If the PM measured during a compliance test is less than or equal to 75% of the emission standard, no further testing shall be required,"* rather than *"...no further testing shall be required during this term of the permit"* as is in the permit**

**Response to 10:** 10.1 No change was made to Permit Conditions 2.4, 2.9, 3.5, 3.10, 4.4, and 4.9 in response to Comment No. 10.1. Refer to the Department's Responses to Comment No.'s 9.1, 9.2, and 9.3

10.2. No change was made to Permit Conditions 2.4, 3.5, and 4.4 in response to Comment No. 10.2. A one-time source test with results less than or equal to 75% of the applicable emission standard does not assure continuous compliance with the emissions standard. The compliance testing requirements in the permit allow for reduced testing frequency based on the outcome of the initial test. The lower the emissions measured during initial testing, the less frequent additional testing is required during the permit term. However, at least one test is required per permit term.

**Comment 11:** **Monitoring and Recordkeeping (Permit Conditions 2.6, 3.7, and 4.6)**

**TASCO submitted a comment requesting visible emission inspections to the boilers and the dryers be reduced from weekly to monthly.**

**Response to 11:** Changes have made to Permit Conditions 2.6, 3.7, and 4.6 in response to Comment No. 11. A tiered approach was used in these permit conditions.

**Comment 12:** **Operations and Maintenance Manuals (Permit Conditions 2.11, 3.12, 4.12, 5.2, 5.3, 6.2, 6.3, 7.2, 7.3, 8.2, 8.3, 9.3, 9.4, 10.2, 10.3, 11.2, and 11.3)**

**TASCO submitted several comments requesting that the requirements for the O&M manuals be revised.**

1. Specify that O&M manuals are for emissions control equipment only.
2. Remove the requirement of approval of O&M manuals in the permit.
3. Change the O&M manual content requirements in the permit.

**Response to 12:**

12.1 The O&M manuals discussed in this permit are intended for the emissions units and their associated control devices. Descriptions of the control device monitoring programs must be included in the O&M manuals. The control device monitoring programs must be updated after each compliance test.

12.2 The approval of initial O&M manuals and updated control device monitoring programs in the O&M manuals for the boilers and dryers remained the same. The dryers and boilers are the sources that emit at major source levels (e.g. the potential to emit PM<sub>10</sub> from each boiler is greater than 250 T/yr and the potential to emit PM<sub>10</sub> from each dryer is greater than 150 T/yr). For this reason, the Department wants documented each emissions units operating parameters (ranges and operating conditions), the methods and procedures TASCO will use to operate the emissions units and control equipment, and how compliance with all applicable emissions standards will be maintained. The only O&M manuals the Department is requiring be submitted for review and approval are for the boilers and dryers. The requirement of O&M manual approval for other emissions units was removed. Corresponding changes were made to the technical memorandum.

12.3 No change has been made to the O&M manual content requirements in the permit.

**Comment 13:**

**Monitoring and Recordkeeping (Permit Conditions 2.6, 3.7, and 4.6)**

TASCO submitted a comment requesting a change to Permit Conditions 2.6, 3.7, and 4.6 on visible emissions monitoring.

**Response to 13:**

The Department changed Permit Conditions 2.6, 3.7, and 4.6 in response to Comment No. 13. Visible emissions monitoring has the tiered approach as identified in Response to Comment No. 11.

**Comment 14:**

**Permit Limits/Operating Requirements (Permit Condition 4.2)**

TASCO submitted several comments requesting the language in IDAPA 58.01.01.700.03 be used in Permit Condition 4.2.

**Response to 33:**

The change has been made to Permit Condition 4.2 in response to Comment No. 14.

**Comment 15:**

**Permit Limits/Operating Requirements (Permit Conditions 5.2, 6.2, 7.2, 8.2, 9.3, 10.2, and 11.2)**

TASCO submitted a comment that language such as "in good working order" or "as efficiently as practicable" in the permit may leave TASCO open to subjective standards that an inspector can use to require more than the requirements in the permit.

**Response to 15:**

Permit Conditions 5.2, 6.2, 7.2, 8.2, 9.3, 10.2, and 11.2 have been modified to address this concern. The following language has been added to the aforementioned permit conditions "Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department which may include, but is not limited

*to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.” This language eliminates the possibility of inspectors setting subjective standards without further information or investigation. This is the language that is used in 40 CFR 60 and 61, General Provisions.*

**Comment 16:**                    **Permit Limits/Operating Requirements (Emissions Units Group 10)**

**TASCO submitted a comment requesting emissions units group 10, Lime Kiln Building Material Handling Baghouses, be deleted because TASCO considers this emissions units group to qualify as an insignificant activity.**

**Response to 16:**            The controlled emissions from lime kiln building material handling baghouses are 0.1 T/yr, per TASCO's 1995 Tier I application. The uncontrolled emissions  $(0.1/(1-99\%) = 10 \text{ T/yr})$  exceed 10% of the significant level for PM, which is 2.5 T/yr. Therefore, the lime kiln building material handling baghouses do not qualify as insignificant activities. No change has been made to the permit.

**Comment 17:**                    **Compliance Schedule**

**TASCO submitted comments requesting the compliance schedule in the permit and the technical memorandum be deleted.**

**Response to 17:**            TASCO is not in compliance for the sources identified in the permit; therefore, the compliance schedule remains.

**Comment 18:**                    **Reporting Deviations and Excess Emissions (Permit Condition 14.25)**

**TASCO submitted a comment requesting the word “promptly” be removed from the General Provision Permit Condition 14.25.**

**Response to 18:**            The word “promptly” is in the SIP approved rule. No change was made to the permit.

**Comment 19:**                    **Miscellaneous Permit and Technical Memorandum Language and Numbering**

**TASCO submitted several comments noting miscellaneous errors and typographical mistakes within the permits.**

**Response to 19:**            The typographical errors and mistakes have been corrected.

**Comment 21:**                    **Emission Limits of All Pollutants, Including Toxic Air Pollutants (TAPs)**

**Comments submitted by the Idaho Conservation League requested that the Department curtail TASCO's emissions to ensure that the airshed's air quality is maintained and protected throughout the life of the permit and that the Department establish new emissions limits for toxic substances regulated under IDAPA 58.01.01.161 and 585 and for other regulated pollutants currently not regulated in the exiting permits.**

**Response to 21:**            The Department's Tier I operating permit program does not provide the regulatory authority to impose requirements other than those that specifically apply to the source. Idaho's air toxics requirements are not an approved part of the SIP; therefore, they do not apply to Tier I major sources. No specific air toxics rules apply to this facility.

**Comment 22:**                    **Prevention of Significant Deterioration (PSD)**

Comments submitted by the Idaho Conservation League state that TASCO facility in Paul needs a PSD permit.

**Response to 22:**            Based on currently available information, the Department does not believe TASCO has triggered PSD. However, the facility emissions are greater than PSD major source threshold levels. Should TASCO have a significant net emissions increase in the future, that modification is subject to PSD review.

**Comment 23:**                    **Failure to Disclose Pollutants**

The Idaho Conservation League submitted a comment stating that the Department has failed to include a thorough breakdown of all pollutants emitted by the facility, and requests that the permits be amended to include this information.

**Response to 23:**            The Department did include a breakdown of all criteria pollutants and all known toxic air pollutants emitted by TASCO in "Technical Basis for the Tier I Operating Permit," (Appendix A). This table is based upon potential emissions rates.

**Comment 24:**                    **Failure to Call for Best Available Retrofit Technology (BART)**

The Idaho Conservation League submitted a comment stating that the Department should redraft the permits to require TASCO to upgrade the abatement devices on each of its emission units.

**Response to 24:**            The information in TASCO's Tier I operating permit application is not sufficient to determine whether TASCO's coal-fired boilers are subject to BART or not; however, there are no applicable requirements for BART at this time anyway. Requirements may be included in Idaho's regional haze implementation plan when submitted to the EPA. The requirements for BART are found under the regional haze rule in 40 CFR 51.308. The permit has not been changed in response to this comment.

**Comment 25:**                    **Permit Duration**

A comment submitted by the Idaho Conservation League states that the draft permit does not contain an expiration date.

**Response to 25:**            The draft Tier I operating permit submitted for public comment does not contain expiration date because the permit has not been issued as final permit. In accordance with IDAPA 58.01.01.322.13, the permit term will be up to a five-year period, beginning upon the date of issuance. At such time as the permit is issued as final permit, the issuance date and expiration date will appear on the first page of the permit. The permit has not been changed in response to this comment.

**Comment 26:**                    **Concern Over Use of Coal and Request to Use Low Sulfur Coal**

A comment submitted by the Idaho Conservation League states that the Department should go beyond the requirements of IDAPA 58.01.01.729 and require that TASCO use only low sulfur coal.

**Response to 26:**            The Rules for the Control of Air Pollution in Idaho specifically limit the sulfur content of all coal combusted to 1% by weight or less. The Department does not have the regulatory authority under its Tier I operating permit program to impose a regulation that is more stringent than that allowed by a SIP approved rule. Consequently, the permit cannot be changed.

**Comment 27:**                    **Hazardous Air Pollutants (HAPs) Re-opener**

The Idaho Conservation League submitted a comment requesting "...a 're-opener clause' to allow the permit to be re-opened when DEQ does finally propagate additional HAP standards and guidelines."

**Response to 27:**            Permit Condition 14.15 in the draft Tier I General Provisions states:

*"The permittee shall comply with applicable requirements that become effective during the permit term on a timely basis."*

No changes have been made to the Tier I permit in regard to this comment.

**Comment 28:**                    **Odor Concerns**

A comment was submitted by the Idaho Conservation League requesting that the Department not to allow the Paul facility to produce odors that result in air pollution. Local residents submitted comments about odor concerns as well.

**Response to 28:**            Permit Conditions 2.5 and 2.6 of the Tier I permit contain the applicable requirement for odorous releases, as well as monitoring and recordkeeping necessary to show compliance with the requirement. The Department deems these provisions of the permit as sufficient to enforce compliance with applicable provisions of the *Rules* (refer to IDAPA 58.01.01.775-776). TASCO is not currently classified as out of compliance with IDAPA 58.01.01.755-776; therefore, it is inappropriate to place Permit Conditions 2.5 and 2.6 in the compliance schedule. No changes have been made to the permits as a result of this comment.

The Department anticipates that removal of the Center and North pulp dryers, along with installation and operation of the steam dryer system (refer to Permit Conditions 14.8 of the Tier I permit) will significantly reduce or eliminate historical odor issues associated with the facility.

**END OF COMMENTS**